

ABSTRACT

An integrated circuit chip 501 has a plurality of contact pads (FIG. 5B) to be connected by reflow attachment 5 510 to outside parts. The chip comprises a deposited layer 505 of nickel/titanium alloy on each of the pads; the alloy has a composition and crystalline structure operable in reversible phase transitions under thermomechanical stress, whereby mechanical strain is absorbed by the alloy layer. 10 Preferably, the alloy has between 55.0 and 56.0 weight% nickel, between 44.0 and 45.0 weight% titanium, and a thickness in the range from 0.3 to 6.0 μm , recrystallized after deposition in a temperature range from 450 to 600 $^{\circ}\text{C}$ for a time period between 4 and 6 min. A layer 506 of 15 solderable metal is on the alloy, operable as diffusion barrier after reflow attachment.